

RemarksRejections Under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-8, 12-14, 17, and 19-20 under 35 U.S.C. § 102(b) as anticipated by United States patent number 4,003,660, issued to John S. Christie, Jr. et al (hereinafter referred to as Christie). The Applicants respectfully request careful consideration of the following explanations regarding the Examiner's rejection of the claims under 35 U.S.C. § 102(b).

Rejections of Claims 1-4 Under 35 U.S.C. § 102(b)

Claim 1 includes the limitations of "test strips ***each of a single color*** formed on a sheet of media traveling said path, each strip having a ***geometric configuration such that each of said photodetectors detects substantially discrete regions of that strip***". (emphasis added) The Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of claim 1 read.

In item 3 of page 2 of the office action, the Examiner seems to suggest that the limitations of "test strips each of a single color" read upon "color bars 12" disclosed in Christie. Additionally, in this section of the office action, the Examiner seems to suggest that the "plurality of photodetectors" recited in claim 1 reads upon the "photosensors 19" disclosed in Christie. Christie, column 5, line 31 through line 41 discloses:

A typical color bar pattern may be comprised of blocks, either rectangular or square, which are of the order of one-eighth of an inch to one-quarter of an inch in length and width. A four color printing operation would have ***white (the paper itself), cyan, yellow, magenta, and black squares placed side by side to form the color bar***. The ***color bars 12 are printed side by side in a line across the width*** of the sheet of printed material and the line of color bars is repeated many times at periodic intervals along the length of the web. (emphasis added)

Also, column 7, lines 27 through 30 of Christie disclose:

FIG. 3 depicts the manner in which the sensing head housing 25 is centered over an appropriate color bar for reading out the density of the respective elemental color areas comprising the color bar. ***In FIG. 3 an exemplary color bar, shown at 12, is comprised by a white color area, the elemental color areas of cyan, yellow and magenta, and a black color area.*** (emphasis added)

Furthermore, column 8, line 1 through 10 of Christie discloses:

In addition to the semiconductor photodetector cells associated with each of the filter elements ***for the elemental color areas comprising the color bar 12***, additional slit-like photosensitive cells 19A and 19B are provided on each side of the central photosensitive cell 19C and are designed to respond respectively to ***light from the cyan and magenta elemental color areas of color bar 12*** that are on each side of the yellow elemental color area which is centrally disposed in each color bar. (emphasis added)

As used in Christie, "color bars 12" and "color bar" both appear to refer to a group of "squares" of "elemental colors" placed side by side". Christie, column 6, line 9 through line 28 discloses:

Light reflected from each of the elemental color areas comprising a color bar passing through the inspection zone 10 is imaged upon a receptor- objective lens assembly 16. The receptor-objective lens assembly 16 comprises wide aperture, flat field lens assembly for collecting and focusing light received from each of the elemental color areas in the color bar and projecting an image of the color bar upon an aperture plate assembly 17. The aperture plate 17 serves to isolate a particular area of each of the elemental colors comprising the color bar and passes the respective elemental color image through a complimentary filter shown at 18 to cause it to impinge upon the photosensitive surface of a respective photosensitive device 19. The photosensitive device 19 preferably comprises a semiconductor photo diode or other high impedance, fast responding photodetector. The photosensors 19 develop respective electric output signals which are representative of the reflectance and hence density of each of the elemental colors comprising the color bar. (emphasis added)

As shown in Figure 1 of Christie and as described in these cited sections of Christie, the "light reflected from each of the elemental color areas comprising a

color bar" (emphasis added) is focused on the "aperture plate assembly 17" and then passed through "a complimentary filter" before impinging upon "a respective photosensitive device 19". The Applicant submits that this disclosure of Christie is not read upon by the above recited limitations of claim 1 because claim 1 recites that "test strips each of a *single* color formed on a sheet of media traveling said path, *each strip* having a geometric configuration such that *each* of said photodetectors detects substantially discrete regions of *that strip*". (emphasis added) That is, while Christie discloses that light reflected from each of the elemental color areas (which as shown by reference to the sections of Christie cited above are of different colors) is focused on the aperture plate assembly 17 so that "photosensors 19 develop respective electric output signals which are representative of the reflectance and hence density of *each of the elemental colors* comprising the color bar" (emphasis added), claim 1 recites that "each of said photodetectors detects substantially discrete regions of that strip", where "that strip" is of a "single color".

Therefore, Christie does not appear to disclose subject matter upon which all the limitations of claim 1 read. As the Applicant knows that the Examiner is certainly aware, MPEP 2131 requires that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference". Because Christie does not disclose subject matter upon which every limitation of claim 1 reads, a valid prima facie anticipation rejection of claim 1 with respect to Christie is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b).

Claims 2-4 are dependent upon claim 1 and therefore incorporate all the limitations of claim 1. For at least the reason that a valid prima facie anticipation rejection of claim 1 is not present with respect to Christie, a valid prima facie anticipation rejection of claims 2-4 is not present with respect to Christie. Accordingly, the Applicants respectfully request withdrawal of the rejections of claims 2-4 under 35 U.S.C. § 102(b).

Rejections of Claims 5-8 Under 35 U.S.C. § 102(b)

The amended claim 5 includes limitations of "A color hard copy apparatus, having a mechanism to generate color strips, each of an intended uniform color" and "an array of sensors, each of the sensors mounted for detecting color properties of a unique one of discrete areas of each of the color strips". As explained in detail with respect to the rejection of claim 1 as anticipated by Christie, the Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of the amended claim 5 read. That is, Christie does not appear to disclose subject matter upon which **"each of the sensors mounted for detecting color properties of a unique one of discrete areas of each of the color strips"**, where the "color strips" are **"each of an intended uniform color"**. (emphasis added) Therefore, because Christie does not disclose subject matter upon which every limitation of the amended claim 5 reads, a valid prima facie anticipation rejection of claim 5 with respect to Christie is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 5 under 35 U.S.C. § 102(b).

Claims 6-8 are dependent upon the amended claim 5 and therefore incorporate all the limitations of the amended claim 5. For at least the reason that a valid prima facie anticipation rejection of the amended claim 5 is not present with respect to Christie, a valid prima facie anticipation rejection of claims 6-8 is not present with respect to Christie. Accordingly, the Applicants respectfully request withdrawal of the rejections of claims 6-8 under 35 U.S.C. § 102(b).

Rejections of Claims 12-14 Under 35 U.S.C. § 102(b)

The amended claim 12 includes limitations of "a printing engine operable to form color strips on a print medium, each of the color strips being of an intended uniform color" and "an array of sensors located downstream from the printing engine along a direction of travel of the printing medium, the array oriented along an axis generally parallel to an orientation of the color strips, wherein as each of the color strips passes within view of the array, each of the

sensors is positioned to allow detection of a unique one of a plurality of substantially discrete regions on each of the color strips". As explained in detail with respect to the rejection of claim 1 as anticipated by Christie, the Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of the amended claim 12 read. That is, Christie does not appear to disclose subject matter upon which "a printing engine operable to form color strips on a print medium, ***each*** of the color strips ***of an intended uniform color***" and "an array of sensors located downstream from the printing engine along a direction of travel of the printing medium, the array oriented along an axis generally parallel to an orientation of the color strips, wherein as each of the color strips passes within view of the array, ***each of the sensors is positioned to allow detection of a unique one of a plurality of substantially discrete regions on each of the color strips***" (emphasis added) read. Therefore, because Christie does not disclose subject matter upon which every limitation of the amended claim 12 reads, a valid prima facie anticipation rejection of claim 12 with respect to Christie is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 12 under 35 U.S.C. § 102(b).

Claims 13-14 are dependent upon the amended claim 12 and therefore incorporate all the limitations of the amended claim 12. For at least the reason that a valid prima facie anticipation rejection of the amended claim 12 is not present with respect to Christie, a valid prima facie anticipation rejection of claims 13-14 is not present with respect to Christie. Accordingly, the Applicants respectfully request withdrawal of the rejections of claims 13-14 under 35 U.S.C. § 102(b).

Rejection of Claims 17 Under 35 U.S.C. § 102(b)

The amended claim 17 includes limitations of "A color measurement system for use with color strips formed on a print medium, with each of the color strips of a single color" and "an array of photodetectors oriented along an axis generally parallel to an orientation of the color strips so that as one of the color

strips passes within view of the array, each photodetector is positioned to measure a spectral characteristic of a unique one of a plurality of substantially discrete regions of the one of the color strips". As explained in detail with respect to the rejection of claim 1 as anticipated by Christie, the Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of the amended claim 17 read. That is, Christie does not appear to disclose subject matter upon which "A color measurement system for use with color strips formed on a print medium, with ***each of the color strips of a single color***" and "an array of photodetectors . . . so that as ***one of the color strips passes within view of the array, each photodetector is positioned to measure a spectral characteristic of a unique one of a plurality of substantially discrete regions of the one of the color strips***". (emphasis added) Therefore, because Christie does not disclose subject matter upon which every limitation of the amended claim 17 reads, a valid prima facie anticipation rejection of claim 17 with respect to Christie is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 17 under 35 U.S.C. § 102(b).

Rejections of Claims 19-20 Under 35 U.S.C. § 102(b)

The amended claim 19 includes limitations of "forming a color strip of a single color on a print medium" and "using each photodetector, of an array of photodetectors oriented along an axis generally parallel to an orientation of the color strip, to measure a spectral characteristic of a one of a plurality of substantially discrete regions, corresponding to the photodetector, of the color strip, as the color strip passes within view of the array". As explained in detail with respect to the rejection of claim 1 as anticipated by Christie, the Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of the amended claim 19 read. That is, Christie does not appear to disclose subject matter upon which "forming a color strip of a ***single color*** on a print medium" and "***using each photodetector . . . to measure a spectral characteristic of a one of a plurality of substantially discrete regions,***

corresponding to the photodector, of the color strip, as the color strip passes within view of the array". (emphasis added) Therefore, because Christie does not disclose subject matter upon which every limitation of the amended claim 19 reads, a valid prima facie anticipation rejection of claim 19 with respect to Christie is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 19 under 35 U.S.C. § 102(b).

Claim 20 is dependent upon the amended claim 19 and therefore incorporates all the limitations of the amended claim 19. For at least the reason that a valid prima facie anticipation rejection of the amended claim 19 is not present with respect to Christie, a valid prima facie anticipation rejection of claim 20 is not present with respect to Christie. Accordingly, the Applicants respectfully request withdrawal of the rejection of claim 20 under 35 U.S.C. § 102(b).

Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 9-11 under 35 U.S.C. § 103 (a) as obvious over Christie in view of United States patent number 6,384,918 issued to Hubble, III et al (hereinafter referred to as Hubble). The Applicants respectfully request careful consideration of the following explanations regarding the Examiner's rejection of the claims under 35 U.S.C. § 103(a).

Rejections of Claims 9-11 Under 35 U.S.C. § 103(a)

The amended claim 9 includes the limitations of "illuminating with broad band light, a region of a color pattern generated by the device, ***the color pattern having a first color***" and "sensing actual color characteristics of ***discrete areas*** of said region using ***each of a plurality of sensors for the sensing of a unique one of the discrete areas***". As explained in detail with respect to the rejection of claim 1, the Applicant respectfully submits that Christie does not disclose subject matter upon which these limitations of the amended claim 9 read because the "discrete areas" of the region have "a first color" instead of "elemental color areas of cyan, yellow, and magenta, and a black color area" as disclosed in

Christie.

Furthermore, to the extent the Examiner may assert that subject matter upon which limitations of claim 9 identified above read that is missing from Christie can be found in Hubble, the Applicant respectfully submits that there is not a motivation, teaching, or suggestion to combine the disclosure of these references. As the Applicant knows the Examiner is well aware, according to MPEP 2143.01, "If the proposed modification or combination of the prior art **would change the principle of operation of the prior art invention being modified**, then the teachings of the references are not sufficient to render the claims prima facie obvious", (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). (emphasis added)

The Applicant respectfully submits that if the subject matter disclosed in Christie was modified to make use of the "test patches 31" disclosed in Hubble, the principle of operation of the subject matter disclosed in Christie would be changed. A principle of operation of Christie is that "photosensors 19 develop respective electric output signals which are representative of the reflectance and hence density **of each of the elemental colors comprising the color bar**. The electric output signals are then supplied through suitable amplifying circuits 21 preferably to sample and hold circuits 22 for display and use by an operator of the multi-color printing press for making appropriate adjustments to the ink control keys to maintain predetermined color density standards." However, if "test patches 31" were substituted for the "color bars 12", the output of "sample and hold circuits 22" disclosed in Christie would not be representative of a corresponding density of one of the "elemental colors comprising the color bar" because as shown in Fig. 4 of Hubble, each of "test patches 31" is formed of a color. Therefore, the Applicant respectfully submits that a valid prima facie obviousness rejection of claim 9 with respect to Christie and Hubbel is not present for at least this reason. Accordingly, the Applicant respectfully requests withdrawal of the rejection of claim 9 under 35 U.S.C. § 103(a).

Claims 10-11 are dependent upon the amended claim 9 and therefore incorporate all the limitations of the amended claim 9 by reference. For at least

the reason that a valid prima facie obviousness rejection of the amended claim 9 is not present with respect to Christie and Hubbel, a valid prima facie obviousness rejection of claims 10-11 is not present with respect to Christie. Accordingly, the Applicants respectfully request withdrawal of the rejections of claims 10-11 under 35 U.S.C. § 103(a).

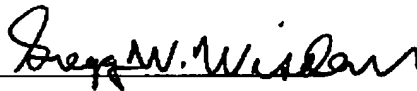
Objections to the Claims

The Examiner has objected to claims 15-16, 18, and 21 as including patentable subject matter but dependent upon rejected claims. The Applicants respectfully contend that the amendments to claims 12, 17, and 19 put claims 15-16, 18, and 21 in a condition for allowance. Accordingly, the Applicants respectfully request that the Examiner withdraw the objections to claims 15-16, 18, and 21.

Conclusion

The Applicants submit that the subject application is in a condition for allowance. Allowance is therefore respectfully requested.

Respectfully submitted,
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